

Claims

What is claimed is:

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1. A method for separating nucleic acid from a test sample comprising:
 - a) contacting a test sample with a metal oxide support material with a binding buffer to form nucleic acid/metal oxide support material complexes, wherein the binding buffer comprises a chaotropic agent and a detergent;
 - b) separating the complexes from the test sample; and
 - c) eluting the nucleic acid from the metal oxide support material.
 2. The method of claim 1 wherein the binding buffer further comprises a reducing agent.
 3. The method of claim 1 wherein the binding buffer further comprises an organic solvent and the flashpoint of the binding buffer is greater than 130 degrees Fahrenheit.
 4. The method of claim 2 wherein the binding buffer further comprises an organic solvent and the flashpoint of the binding buffer is greater than 130 degrees Fahrenheit.
 5. The method of claim 1 further comprising a wash step after separating the complexes from the test sample and before eluting the nucleic acid from the metal oxide support material.
 6. The method of claim 1 wherein eluting the nucleic acid from the metal oxide support material comprises contacting the complexes with a reagent selected from water or a phosphate containing buffer.
 7. The method of claim 6 further comprising the step of detecting the nucleic acid after the eluting the nucleic acid from the metal oxide support material.

8. The method of claim 7 further comprising the step of amplifying the nucleic acid after eluting the nucleic acid from the metal oxide support material and before detecting the nucleic acid.
9. The method of claim 7 wherein the nucleic acid comprises nucleic acid from distinct sources.
10. The method of claim 9 wherein the nucleic acid is RNA and DNA.
11. A kit for separating nucleic acid from a test sample comprising:
- a) metal oxide particles;
 - b) a binding buffer comprising
 - (i) a chaotropic reagent, and
 - (ii) a detergent; and
 - c) an elution buffer comprising water.

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